Exploring Aeronautics			
2006 Science			
Content and Achievement Standards			
North Dakota Science			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	ND	SCI.5.5.2.1	Communicate scientific procedures (e.g. visual display, graph, journal, oral presentation) that enable others to repeat the investigation
Fundamentals of Aeronautics (145-176)	ND	SCI.5.5.3.4	Identify the effects force and mass have on the motion of an object
Fundamentals of Aeronautics (145-176)	ND	SCI.5.5.3.5	Explain why gravity is called an attracting force.
Fundamentals of Aeronautics (145-176)	ND	SCI.5.5.8.1	Explain why results of similar scientific investigations may turn out differently (i.e., inconsistencies in methods, materials, and observations)
Wings(177-208)	ND	SCI.5.5.6.1	Use technology to design a solution to a problem
Wings(177-208)	ND	SCI.5.5.6.2	Evaluate a product or design using established criteria
Airplane Control(209-256)	ND	SCI.5.5.3.4	Identify the effects force and mass have on the motion of an object
Airplane Control(209-256)	ND	SCI.5.5.3.5	Explain why gravity is called an attracting force.
Airplane Control(209-256)	ND	SCI.5.5.6.1	Use technology to design a solution to a problem
Airplane Control(209-256)	ND	SCI.5.5.6.2	Evaluate a product or design using established criteria
Tools of Aeronautics(257-326)	ND	SCI.5.5.1.1	Use an appropriate model (e.g., drawing, equation, computer program, diagram, or 3-D device) to convey scientific information
Tools of Aeronautics(257-326)	ND	SCI.5.5.6.1	Use technology to design a solution to a problem
Tools of Aeronautics(257-326)	ND	SCI.5.5.6.2	Evaluate a product or design using established criteria
How an Airplane Flies	ND	SCI.5.5.3.4	Identify the effects force and mass have on the motion of an object
How an Airplane Flies	ND	SCI.5.5.3.5	Explain why gravity is called an attracting force.
The Activity Center	ND	SCI.5.5.3.4	Identify the effects force and mass have on the motion of an object
The Activity Center	ND	SCI.5.5.3.5	Explain why gravity is called an attracting force.
The Activity Center	ND	SCI.5.5.6.1	Use technology to design a solution to a problem
Science of Flight	ND	SCI.5.5.1.1	Use an appropriate model (e.g., drawing, equation, computer program, diagram, or 3-D device) to convey scientific information
Science of Flight	ND	SCI.5.5.3.4	Identify the effects force and mass have on the motion of an object
Science of Flight	ND	SCI.5.5.3.5	Explain why gravity is called an attracting force.

Science of Flight	ND	SCI.5.5.6.1	Use technology to design a solution to a problem
Integrating with Aeronautics	ND	SCI.5.	5.2.1. Communicate scientific procedures (e.g. visual display, graph, journal, oral presentation) that enable others to repeat the investigation
Integrating with Aeronautics	ND	SCI.5.5.3.4	Identify the effects force and mass have on the motion of an object
Integrating with Aeronautics	ND	SCI.5.5.3.5	Explain why gravity is called an attracting force.
Integrating with Aeronautics	ND	SCI.5.5.5.1	Measure weather conditions (i.e., temperature, wind direction and speed, and precipitation)
Intro to Aeronautics (109-123)	ND	SCI.5.5.2.2	Formulate an explanation supported by data
Intro to Aeronautics (109-123)	ND	SCI.5.5.3.4	Identify the effects force and mass have on the motion of an object
Intro to Aeronautics (109-123)	ND	SCI.5.5.3.5	Explain why gravity is called an attracting force.
Scientific Method(124-144)	ND	SCI.5.5.6.2	Evaluate a product or design using established criteria
Scientific Method(124-144)	ND	SCI.5.5.8.1	Explain why results of similar scientific investigations may turn out differently (i.e., inconsistencies in methods, materials, and observations)
Exploring Aeronautics			
2006 Science			
Content and Achievement Standards			
North Dakota Science			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	ND	SCI.6.6.2.1	Explain the components of a scientific investigation (e.g., hypothesis, observation, data collection, data interpretation, communication of results, replicable)
Wings(177-208)	ND	SCI.6.6.6.2	Design a product or solution to a problem given constraints (e.g., limits of time, costs, materials and environmental factors)
Wings(177-208)	ND	SCI.6.6.8.1	Identify various settings in which scientists may work alone or in a team (e.g., industries, laboratories, field work)
The Tools of Aeronautics	ND	SCI.6.6.6.2	Design a product or solution to a problem given constraints (e.g., limits of time, costs, materials and environmental factors)
The Resource Center	ND	SCI.6.6.8.1	Identify various settings in which scientists may work alone or in a team (e.g., industries, laboratories, field work)
Science of Flight	ND	SCI.6.6.2.1	Explain the components of a scientific investigation (e.g., hypothesis, observation, data collection, data interpretation, communication of results, replicable)
Science of Flight	ND	SCI.6.6.2.2	Select alternative methods of scientific investigations (e.g., library, internet, field work) to address different kinds of questions.

Science of Flight	ND	SCI.6.6.2.4	Use appropriate tools and techniques to gather and analyze data
Science of Flight	ND	SCI.6.6.3.3	Identify different forms of energy (e.g., chemical, mechanical, heat, sound)
Science of Flight	ND	SCI.6.6.6.2	Design a product or solution to a problem given constraints (e.g., limits of time, costs, materials and environmental factors)
Integrating with Aeronautics	ND	SCI.6.6.2.1	Explain the components of a scientific investigation (e.g., hypothesis, observation, data collection, data interpretation, communication of results, replicable)
Intro to Aeronautics (109-123)	ND	SCI.6.6.2.1	Explain the components of a scientific investigation (e.g., hypothesis, observation, data collection, data interpretation, communication of results, replicable)
Intro to Aeronautics (109-123)	ND	SCI.6.6.2.4	Use appropriate tools and techniques to gather and analyze data
Intro to Aeronautics (109-123)	ND	SCI.6.6.2.5	Use data from scientific investigations to determine relationships and patterns
Intro to Aeronautics (109-123)	ND	SCI.6.6.6.2	Design a product or solution to a problem given constraints (e.g., limits of time, costs, materials and environmental factors)
Scientific Method(124-144)	ND	SCI.6.6.2.1	Explain the components of a scientific investigation (e.g., hypothesis, observation, data collection, data interpretation, communication of results, replicable)
Scientific Method(124-144)	ND	SCI.6.6.2.2	Select alternative methods of scientific investigations (e.g., library, internet, field work) to address different kinds of questions.
Scientific Method(124-144)	ND	SCI.6.6.2.4	Use appropriate tools and techniques to gather and analyze data
Scientific Method(124-144)	ND	SCI.6.6.2.5	Use data from scientific investigations to determine relationships and patterns
Exploring Aeronautics			
2006 Science			
Content and Achievement Standards			
North Dakota Science			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Tools of Aeronautics(257-326)	ND	SCI.7.7.1.1	Explain how models can be used to illustrate scientific principles (e.g., osmosis, cell division)
The Tools of Aeronautics	ND	SCI.7.7.1.1	Explain how models can be used to illustrate scientific principles (e.g., osmosis, cell division)
Science of Flight	ND	SCI.7.7.1.1	Explain how models can be used to illustrate scientific principles (e.g., osmosis, cell division)
Science of Flight	ND	SCI.7.7.6.2	Identify technologies (e.g., communication, agriculture, information processing, transportation) that are influenced by societies
Science of Flight	ND	SCI.7.7.8.1	Explain how science is influenced by human qualities (e.g., reasoning, insightfulness, creativity, life-long learning)

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Grade 8			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	ND	SCI.8.8.3.3	Interpret the effect of balanced and unbalanced forces on the motion of an object (e.g., convection currents, orbital motion, tides)
Tools of Aeronautics(257-326)	ND	SCI.8.8.5.1	Explain how factors (i.e., fronts, winds, air masses, air pressure, humidity, temperature, location) affect weather
How an Airplane Flies	ND	SCI.8.8.3.4	Explain how all objects exert gravitational force and this force is affected by the distance between the masses of the objects
Science of Flight	ND	SCI.8.8.2.4	Design and conduct a scientific investigation (e.g., making systematic observations, making accurate measurements, identifying and controlling variables)
Science of Flight	ND	SCI.8.8.5.1	Explain how factors (i.e., fronts, winds, air masses, air pressure, humidity, temperature, location) affect weather
Integrating with Aeronautics	ND	SCI.8.8.2.3	Use basic mathematics and statistics (e.g., operations, mean, median, mode, range, and estimation) to interpret quantitative data
Integrating with Aeronautics	ND	SCI.8.8.2.4	Design and conduct a scientific investigation (e.g., making systematic observations, making accurate measurements, identifying and controlling variables)
Integrating with Aeronautics	ND	SCI.8.8.5.1	Explain how factors (i.e., fronts, winds, air masses, air pressure, humidity, temperature, location) affect weather
Intro to Aeronautics (109-123)	ND	SCI.8.8.2.3	Use basic mathematics and statistics (e.g., operations, mean, median, mode, range, and estimation) to interpret quantitative data
Scientific Method(124-144)	ND	SCI.8.8.2.3	Use basic mathematics and statistics (e.g., operations, mean, median, mode, range, and estimation) to interpret quantitative data
Scientific Method(124-144)	ND	SCI.8.8.2.4	Design and conduct a scientific investigation (e.g., making systematic observations, making accurate measurements, identifying and controlling variables)